

AMENDMENTS

In the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) An automatic releasing-type rolling head for forming a tapered thread on a pipe, comprising:

a cylindrical housing [(30)] with a front closure and a rear ~~closures~~ closure;

a plurality of shaft bearing plates ~~(33)-which that~~ are configured to be slidably ~~supported~~ supported in a plurality of guide grooves [(36)] radially provided on inner surfaces of the front and ~~the~~ rear closures of the housing [(30)], said shaft bearing plates being provided on their outer surfaces in the radial directions with a plurality of oblique surfaces [(33b)];

a plurality of thread rolling rollers [(35)] configured so as to be rotatably supported by the shaft bearing plates [(33)] through a plurality of roller shafts [(34)];

a cam ring ~~(31)-which~~ configured to ~~rotates~~ rotate in the housing [(30)] and ~~[[has]]~~ having a plurality of cam oblique surfaces [(31a)] configured so as to be opposed to the oblique surfaces [(33b)] of the shaft bearing plates [(33)];

a lever ~~(44)-which~~ that is configured to ~~abuts~~ abut, at its oblique surface, against a cam member [(45)], the lever being configured for to ~~prevent~~ preventing a movement ~~thereof of the~~ cam member in association with the cam ring [(31)]; and

an abutment member [(41)] ~~which is~~ configured so as to be pressed and moved by a thread-rolled pipe,

wherein the rolling load ~~[[which]]~~ that acts on the rolling rollers [(35)] during a thread-rolling operation is configured so as to be reduced due to contact friction ~~in the course of~~ transference of when transferring the rolling load to the cam oblique surface [(45a)] of the cam member [(45)] and to the oblique surface of the lever [(44)];

wherein when the to-be-rolled pipe is configured to be thread-rolled to a predetermined length, the oblique surface of the lever [(44)] is configured to be gradually moved away from

the cam member [(45)] moving in association with the cam ring [(31)], in association with the movement of the abutment member [(41)];

~~whereby~~ wherein the cam ring [(31)] is configured to rotate due to the rolling load so that the shaft bearing plates [(33)] and the thread rolling rollers [(35)] are configured to ~~move~~ in a radial direction and an outward direction ~~directions~~ and are configured for released releasing from the to-be-rolled pipe.

2. (Currently Amended) [An] The automatic releasing-type tapered thread rolling head as set forth in of claim 1,

wherein a plurality of radial guide grooves [(36)], whose bottoms are configured parallel to a plane perpendicular to the axis, are provided in the inner surface of the front closure [(30a)] of the housing;

a plurality of guide grooves [(36)] identical in dimension to the guide grooves [(36)] of the front closure [(30a)], are provided in the inner surface of the rear closure [(30c)];

wherein the shaft bearing plates [(33)] are provided with a plurality of shaft bearing holes [(33a)] for supporting the roller shafts [(34)];

wherein the roller shafts [which] are configured for being slidably fitted in the guide grooves [(36)] of the front closure [(30a)] and the rear closure [(30c)] and [which] are configured for being inserted in the center holes of the discontinuous circumferential groove type rolling rollers [(35),];

wherein said shaft bearing holes are configured for being adapted to support the discontinuous circumferential groove type rolling rollers [(35),];

wherein said shaft bearing holes are configured so as to be deviated in the direction of the width of the guide grooves [(36)] of the front closure [(30a)] or the rear closure [(30c)]; ~~in a position and~~ wherein said shaft bearing holes are configured at an angle corresponding to the lead angle of the thread of the to-be-rolled pipe.

3. [[An]] The automatic releasing-type tapered thread rolling head ~~as set forth in~~ of claim 1,

wherein the shaft bearing plates [(33)] are configured to rotatably support the thread rolling rollers [(35)]; ~~are provided with~~

wherein said shaft bearing plates have projections [(33c)], integral therewith, that are configured to extend in the axial direction of the thread rolling rollers, in the vicinity of the outer oblique surfaces [(33b)] that are brought into contact with the cam oblique surfaces [(31a)] of the cam ring [(31)];

wherein the surfaces of the projections [(33c)] that are located opposite to the oblique surfaces [(33b)] are substantially configured in parallel with the oblique surfaces [(33b)] and are configured ~~are provided~~, at the lower portions, ~~[[with]]~~ to have surfaces [(33d)] that are configured in parallel with the width direction of the shaft bearing plates [(33)];

wherein pins [(38)] are provided in the vicinity of the cam oblique surfaces [(31a)] of the cam ring [(31)] so that the projections [(33c)] ~~can be~~ are configured to be engaged by the pins [(38)].

4. [[An]] The automatic releasing-type tapered thread rolling head ~~as set forth in~~ of claim 1,

wherein the portion of the abutment member [(41)] pressed and moved by the thread-rolled pipe ~~[[that]]~~ is configured so as to abut against the to-be-rolled pipe,

wherein the portion of the abutment member has a circular contour ~~[[which]]~~ configured to enables enable the abutment member to ~~be in~~ contact ~~[[with]]~~ the front end surface of the to-be-rolled pipe substantially over the entire periphery.

5. [[An]] The automatic releasing-type tapered thread rolling head ~~as set forth~~ of in claim 1,

wherein a first set of foreign matter discharge holes [(37b)] ~~are provided~~ is configured so as to be in the vicinity of the cam oblique surfaces of the cam ring [(31)];

wherein the first set of foreign matter discharge holes are configured so as to ~~that rotates~~
rotate in the housing [(30)]; [and]

wherein the first set of foreign matter discharge holes [that] are configured for being
brought into contact with the oblique heads of the shaft bearing plates [(33)] ~~for supporting to~~
support the thread rolling rollers; [(35)] and

wherein the second set of foreign matter discharge holes [(37a)], which are configured
to be connected to [the] the first set of foreign matter discharge holes [(37b)] of the cam ring
~~are provided~~ configured [in] inside the housing [(30)].

6. [An] The automatic open type tapered thread rolling head ~~as set forth in~~ of claim 1,
further comprising:

a buffer arm (48) ~~which~~ that is configured for [can] ~~receive~~ receiving the abutment
member [(41)] or a member moving therewith,

wherein the receiving of the abutment is configured at an at an appropriate distance in
[the] an axial direction; [,]

wherein when the to-be-rolled pipe is configured for ~~thread-rolled~~ thread rolling to a
predetermined length by the thread rolling rollers [(35)] and the thread rolling rollers [(35)]
are configured for [moved] moving in the outward and radial directions, the thread rollers
[and] are configured for ~~released~~ release from the pipe; [,]

wherein said buffer arm [(48)] is configured for ~~detached~~ detaching; [so as]

wherein said buffer arm is configured for preventing ~~not to~~ damage to an apparatus body
if the to-be-rolled pipe continues moving in the axial direction, due to failure of the movement of
the thread rolling rollers [(35)] away from the to-be-rolled pipe ~~for some reason~~.

7. [An] The automatic open type tapered thread rolling head ~~as set forth in~~ of claim 1,
wherein a scraper [(59)] for cutting the outer diameter portion of the to-be-rolled pipe is
configured to be movably provided at an insertion opening of the housing [(30)] for the to-be-

rolled pipe, said scraper [(59)] being provided with a cutting blade [(59b)] and an inner diameter portion [(59d)], for guiding the to-be-rolled pipe, which are integrally molded.